

# CIRCUIT INTERCONNECT FOR CONTROLLED IMPEDANCE AT HIGH FREQUENCIES

## ABSTRACT OF THE DISCLOSURE

An optoelectronic assembly includes a transistor outline (TO) package that houses an optoelectronic device. The TO package and the optoelectronic device are coupled to a circuit interconnect. The circuit interconnect includes an insulator having a first side for transmitting a signal current between the optoelectronic device and a device external to the TO package, and a second side for transmitting a ground current between the TO package and the external device. For a predefined operating frequency range, the impedance of the circuit interconnect approximately matches the impedance of the signal leads of the TO package and also approximately matches the impedance of the device external to the TO package. The optoelectronic device may include a laser diode or a photo diode. In addition, the present invention is an optoelectronic transceiver including a transmitter optoelectronic assembly and a receiver optoelectronic assembly. The transmitter optoelectronic assembly includes a transmitter TO package and a transmitter circuit interconnect, and the receiver optoelectronic assembly includes a receiver TO package and a receiver circuit interconnect.